

# The Industrial Emissions Directive

## Chapter III Plant

A joint publication between



# The Industrial Emissions Directive: Chapter III Plant

## Key objectives and interpretational aspects

### Introduction

This document, issued by the UK environment agencies, sets out a common approach under which specific interpretational aspects of the Industrial Emissions Directive (IED) in respect of Chapter III plant (large combustion plant (LCP)) will be implemented across the UK.

This document will have regard to the possible requirements of a revised National Emissions Ceiling Directive (NECD) (which may be finalised by 2016) and to the revised Best Available Technique (BAT) Reference document (BREF) for LCPs (which may be concluded in 2015) as these apply to UK LCPs.

The document, developed in consultation with operators of a range of LCPs, principally comprising coal-fired, gas-fired, oil-fired and biomass-fired plants, outlines certain core rules and interpretations for IED implementation. Where more detailed information is required this will be addressed within the associated annexes. These annex documents will be developed and agreed, issued as soon as practicable. They may also be amended and reissued if required. Competent Authorities may include different approaches to specific issues in individual annexes where local circumstances demand.

### Objectives

The purpose of this document and its associated annexes is to enable consistent interpretation of IED Chapter III across the UK where possible and practicable. This document and its annexes will be applied from 1 January 2016 onwards for existing plant and 7 January 2013 for new plant and will cover the period to 2023. This document has regard to the fact that Chapter III and Annex V of the IED specify minimum requirements which are without prejudice to further controls specified under the BAT-based requirements set out in its Chapter II.

- This document applies to all Chapter III combustion plant (as defined by IED Article 28), including both existing plants and new plants (as defined by IED Articles 30(2) and 30(3) respectively).
- The agreed interpretation will apply fair and proportionate regulation to the categories and individual plants that are covered.
- The agreed interpretations will have regard to UK energy policy and the need for a transition to a low carbon economy through a well-defined pathway.

The agreed interpretations will have regard for the competent authority / Defra / Devolved Administration interpretations of the existing LCP BREF and any revisions thereof (the first of which is currently expected to be finalised in late 2014 and the conclusions adopted mid 2015).

The UK's submission to the LCP BREF process was made in May 2011 (TWG1 etc) and this document is considered to offer additional guidance on examples of current BAT. This may be found at <http://www.environment-agency.gov.uk/business/sectors/142949.aspx>.

This document focuses on the range of IED options and derogations that will be available in the UK. These are:-

- Annex V ELV compliance<sup>1</sup>,
- Article 33 Limited Life Derogation,
- Article 32 Transitional National Plan,
- Annex V (Part 1) 1,500 hours low load operation derogation for SO<sub>2</sub> and NO<sub>x</sub> ELVs for solid, liquid and gas fired plants,
- Article V (Part 1 and Part 2) 500 hours low load derogations for NO<sub>x</sub> ELV for gas turbines for emergency use firing gas or liquid fuels.

The agreed protocols will facilitate an “environmental equivalence” of outcomes, delivered through a range of methods. This will provide flexibility and cost-effectiveness in delivering environmental outcomes.

## Interpretational aspects of the IED

### General

IED conditions apply at a plant (stack) level. BAT applies at a unit level within a plant, at a plant level and at an overall installation level. A mixture of unit-level techniques may be applied within the same plant (stack), subject to the demonstration of equivalence and overall plant BAT i.e. mixed techniques. The Mixed Techniques interpretation is set out in the UK BREF review technical note TWG3 (see Annex 1).

### Permit Conditions

All LCP permits will require review and, where necessary, amending to include the operators selected IED option conditions before 2016. Limited Life Derogation and Transitional National Plan plant are required to have SO<sub>2</sub>, NO<sub>x</sub> and dust ELVs as permitted on 31/12/15 at least maintained. These reviews are necessary to ensure that permit conditions deliver IED requirements and continue to reflect BAT in the period between 2016 until the new BAT AELs must be complied with i.e. 4 years from the date of publication of the BAT conclusions by the Commission. Arrangements for the reviews will be established by individual regulators.

### Definitions

#### Start Up and Shut Down/Operating Hours

Periods of start-up and shut-down are excluded from IED compliance and BAT for normal operation. Start Up and Shut Down protocols for all fuel will be developed in the light of Commission Implementing Decision 2012/249/EU<sup>2</sup>.

‘Operating hours’, (Article 3(27)), for solid, liquid and gas fuels will be defined with reference to the above Start Up and Shut Down Decision.

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<sup>1</sup> It must always be borne in mind that the ELVs specified in Annex V are **minimum** ELVs – that is to say, ELVs no less stringent than those must be set in permits. But the requirements in Chapter II of the Directive also apply and may in some cases compel ELVs more stringent than those in Annex V.

<sup>2</sup> At <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:123:0044:0047:EN:PDF> .

**Monitoring and Compliance Methodologies**

Monitoring uncertainty, Annex V, Part 4. Monitoring and compliance methodologies will be defined for all fuels in a protocol such that compliance may be determined against the appropriate ELVs, incorporating the Start Up and Shut Down Decision (see Annex 2).

**Article 29 Aggregation Rules**

Under the "common stack" definition of "combustion plant", existing plants whose waste gases are, in the view of the competent authority, discharged through a common stack must be considered as a single plant for the purposes of the Directive. Accordingly, when a group of boiler discharge their waste gases through a common stack, the term "existing combustion plant" should be interpreted as that group of boilers. When only one boiler vents through one stack, an existing plant should be interpreted as that boiler.

**Article 30 Emission limit Values**

IED, Annex V part 1 and 2 ELVs for existing and new plant are the minimum required and application of BAT may result in tighter ELVs.

The NO<sub>x</sub> and CO ELVs for gas turbines (including CCGT) set out in Annex V Part 1 apply only above 70 % load. Operations below this loading will be subject to BAT requirements.

NO<sub>x</sub> ELVs for gas turbines including CHP GTs, Annex V part 1, have different values depending on the efficiency of the plant. A definition of how efficiency may be determined when operating at ISO base load conditions will be specified (see Annex 4).

**Annex V 1500 hours derogation**

Emission limit value derogation – Section 2, Section 4 and Section 6 of Part 1 of Annex V, covering solid, liquid and gas-fired plants. Less stringent emission limit values for SO<sub>2</sub> and NO<sub>x</sub> apply to an LCP or a unit within that LCP which operate for less than 1,500 hours per year as a rolling average over a period of 5 years. The five year rolling average for this 1,500 hour derogation starts from the date the derogation is taken. When an LCP leaves the TNP and the LCP (or an individual unit within the LCP) then takes the 1,500 hours derogation, this must be before 1 July 2020 at the latest<sup>3</sup>.

The operating hours of all such plant need to be reported to the commission by the member state (See Article 72(4)(b)), the competent authorities will establish and maintain these monitoring and reporting requirements via operators permits.

Monitoring, notification requirements and other operating rules for the 1500 hours derogation will be developed (see Annex 5).

**Annex V 500 hour derogation**

The 500 hour Annex V derogation applies only to gas turbines and gas engines for emergency use that operate less than 500 operating hours per year.

Notification requirements and other operating rules for the 500 hours derogation will be developed (see Annex 9).

**Article 32 Transitional National Plan**

The Transitional National Plan (TNP) will be constructed and operated in the light of:-

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<sup>3</sup> <http://ec.europa.eu/environment/air/pollutants/stationary/ied/faq.htm#ch3> .

- Commission Implementing Decision 2012/115/EU<sup>4</sup>; and Supplementary UK guidance on the TNP (see Annex 7).

Reporting and verification of TNP emissions and any trading within the TNP national bubbles will be defined (see Annex 8) as will conditions under which plant may leave the Transitional National Plan TNP to meet:-

1. Annex V (including Annex V derogations) or close, or
2. Limited Life Derogations notification before 31 December 2013

A plant's permit will be varied to reflect its passage into the TNP and then varied again from the expiry of TNP on 30<sup>th</sup> June 2020, or from the date of the plant's exit from the TNP if earlier.

### **Article 33 Limited Life Derogation**

Limited Life Derogation (LLD), Article 33, operates from 1/1/16 until 31/12/23 where LCPs may be exempted from compliance with the emission limit values referred to in Article 30(2). The whole of a plant must be subject to the LLD where taken. Operators must submit a declaration to the competent authority by 31 December 2013 if they wish to take the LLD, specifying the plant or plants it is to apply to: declarations after that date will NOT be valid. Declarations are binding with effect from 1 January 2016: an operator may withdraw a declaration at any time before then.

The LLD restricts participating plants to no more than 17,500 hours' operation starting on 1 January 2016 and ending no later than 31 December 2023. Effectively the only way for a plant to leave the LLD and change its status under the IED is to close and reopen as a new plant. In this event, the plant would be treated in the same way as a new build plant i.e. it would be subject to the Annex V part 2 ELVs set out in IED and would also be subject to BAT requirements which would be applied to new build plant.

The Article 33 derogation cannot last beyond 31 December 2023 and all derogation plants will be required to close by this date at the latest. The derogation can finish sooner than this date in the event that the plant is treated as having closed. Hence a plant which is operating under the LLD can elect to close and reopen as a new plant at any time after 1 January 2016.

### **Article 37 Malfunction of Abatement Equipment**

Malfunction or breakdown of the abatement equipment Article 37, will be defined for solid, liquid and gas fuels and a protocol will be developed addressing Article 37 requirements for all operating regimes under the IED (see Annex 3).

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<sup>4</sup> At <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:052:0012:0025:EN:PDF> .

## Annexes

- Annex 1 - Mixed Techniques UK BREF review technical note TWG3
- Annex 2 – IED Monitoring Compliance Protocol (to be developed, will incorporate European Commission decision on Start-up and Shut-down definitions and BAT for GTs operating below 70% load)
- Annex 3 - Malfunction or breakdown of the abatement equipment protocol (to be developed)
- Annex 4 - A definition of how the efficiency of gas turbines is to be determined when operating at ISO base load conditions (to be developed)
- Annex 5 - Notification requirements and other operating rules for the 1500 hours derogation (to be developed) C'ionn has developed guidance
- Annex 6 - European Commission decision on TNP implementing rules
- Annex 7 - Supplementary UK guidance on TNP (letter from DEFRA to operators dated 28 December 2011)
- Annex 8 – Regulator's guidance to monitoring, reporting and trading for the UK TNP (to be developed subject to formal TNP consultation in autumn 2014)
- Annex 9 - Notification requirements and other operating rules for the 500 hours derogation (to be developed)

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